REALLOCATION OF LAKE LANIER, GEORGIA

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WHAT IS REALLOCATION

Reallocation is a proposal to change or "reallocate" 20 percent of the water storage in Lake Lanier that is currently reserved for hydropower generation - and earmark it for water supply. Reallocation of Lake Lanier was recommended by the Corps of Engineers in 1988 as the best method to provide for the current and future water supply needs of both the Lake Lanier communities and the Atlanta Region through the year 2010. This alternative would meet this area's water needs in the most cost-effective and environmentally sound manner, and would not significantly impact other users of the river system.

Reallocation will primarily change the timing of releases of water from Lake Lanier. Currently, large surges of water are released to produce hydroelectricity a few hours a day on weekdays. Very little is released at other times and on weekends when water supply demands are high. Reallocation will smooth out the release pattern from Buford Dam by reducing peak hydropower releases and increasing off-peak releases. In addition, reallocation will provide for withdrawals directly from the Lake for surrounding lake communities.

WATER RESOURCES BACKGROUND

The Atlanta Region obtains most of its water from a river system which is a valuable resource to many people. The headwaters of the Chattahoochee River begin above Helen in the north Georgia mountains. As the river flows south it is impounded by Buford Dam to create Lake Lanier, flows southwest through the Atlanta Region and runs along the Alabama border. Many people are unaware that the border between the states of Georgia and Alabama lies on the Alabama side of the Chattahoochee rather than down the center of the river. The Chattahoochee then meets the Flint River north of the Florida line, where the two rivers merge to form the Apalachicola River. The Apalachicola flows through the Florida panhandle to the Gulf of Mexico. Five federal dams and 11 private dams are along the river system.

The land that drains into these rivers or their tributaries is called the watershed or river basin. The Apalachicola-Chattahoochee-Flint (A-C-F) River Basin covers 19,800 square miles of which 14,500 (73.23%) are in Georgia, 2,800 (14.14%) are in Alabama, and 2,500 (12.63%) sq. mi. are in Florida. The amount of water that flows into the rivers depends on rainfall and the land area that catches the rainfall. In the A-C-F River Basin, most of the water in the rivers originates in the State of Georgia. The level of the flows in the river is controlled by the manner in which the dams on the system are operated.

With the exception of the Chattahoochee River, the Atlanta Region's streams are generally small-because of its location on a sub-continental divide. Groundwater is also limited since the Region rests primarily on crystalline rock. The Chattahoochee/Lake Lanier system is the only major source of water available to the Atlanta area and the Region is dependent on it for about 80 percent of its water supply.

REALLOCATION HISTORY

The Atlanta Region would have stopped growing years ago had it not been for the vision of leaders like Mayor Hartsfield of Atlanta and Senator Richard Russell who planned and then achieved the construction of Buford Dam and Lake Lanier. The Buford Dam/Lake Lanier project is a federal Corps of Engineers project which releases water into the Chattahoochee River. It was authorized by Congress in 1946 and built between 1950-1957 for navigation, hydropower, flood control, and water supply/water quality for Atlanta. Since then, recreation has become a major use of the project.

The original authorization documentation for Buford Dam clearly indicates that water supply and water quality for the Atlanta Region was a purpose of the project. Further, documentation shows that increased offpeak releases for future Atlanta Region water withdrawals was fully intended for the project. The Atlanta Region needs and is ready to fully realize the vision of its former leaders.

These efforts have a long history. In 1972, Congress authorized the Metropolitan Atlanta Water Resources Management Study (MAWRS) to develop a long-range water supply management plan. The study verified that, indeed, the Lake Lanier/Chattahoochee River was the only reasonable major source of water for the Atlanta Region and studied many alternatives for its management.

Since off-peak flows in the Chattahoochee River were already becoming inadequate, the first outcome of MAWRS was to set up temporary arrangements to increase off-peak releases (those other than hydropower) from Lake Lanier while a permanent solution to provide for the Atlanta Region's water needs was pursued. Temporary arrangements

were first put in place in 1975.

The most recent temporary contracts expired in 1989 and another temporary agreement to supply the metro Atlanta area with its current water needs has been prepared by the Corps. Reallocation will be a significant part of the permanent solution for the Atlanta Region's water supply.

In 1981, the MAWRS study recommended that a reregulation dam be built below Buford Dam, provided that water quality and other environmental concerns could be addressed. The reregulation dam was a small dam on the Chattahoochee River below Lake Lanier designed to capture weekday hydropower surges from Buford Dam and re-release them at other times in a manner more suited to water supply use. The reregulation dam was authorized in the Federal Water Resources Act of 1986 with conditions that environmental concerns and economic issues be evaluated in more detail prior to construction approval. Strong environmental opposition to the reregulation dam existed.

Subsequently, more detailed economic and environmental studies by the Corps of Engineers during 1984-1988 resulted in the reversal of the 1981 recommendation. The studies showed that a minor change in the release patterns from Buford Dam by the reallocation of Lake Lanier would be more economical and less environmentally damaging than building a reregulation dam. The Corps' 1988 recommendation is to change or reallocate 20 percent of the water stored in Lake Lanier from hydropower use to water supply use. The reallocation plan will meet the water supply needs of the Atlanta Region and other Lake Lanier users to the year 2010.

NEED FOR THE REALLOCATION OF LAKE LANIER

Georgia was the third fastest growing state in the nation during the 1980s, with more than 50 percent of that growth contributed by the Atlanta Region. The Atlanta Regional Commission forecasts continued, healthy growth for the Atlanta Region through the year 2010. From a current population of over 2.4 million, the Region is expected to be home to more than 3.7 million people in the year 2010. Jobs are forecasted to grow from about 1.4 million today to over 2.3 million over the next 20 years.

The ARC Regional Water Supply Plan forecasts that even with a strong water conservation element, an average of 580 MGD of water will be needed by the year 2010 to serve the Region. 83 percent of this water will need to come from the Chattahoochee River/ Lake Lanier system. Without a secure, long-term water supply plan such as reallocation of Lake Lanier, the Region's existing economic health and future growth potential will be jeopardized.

The Atlanta Region makes a major contribution to the economy of the State. The Atlanta Region contributes nearly 50 percent of the personal income tax paid to the State and 50% of the total taxable sales revenue.

A significant reason for the growth in the State has been the relocation of domestic and foreign companies to Georgia. In the domestic and international market, Georgia's advantage is built on the linkage between small town plant sites and the broad range of services offered by an economically healthy metropolitan area like Atlanta. The access to markets, transportation, banking, and other services available only in a large, urban center like Atlanta creates a magnet capable of pulling industry and capital into Georgia and funneling it to developing local economies throughout the State.

Without reallocation, the Atlanta Region as well as the State of Georgia stands to suffer severe economic consequences. The loss of potential jobs, as well as existing jobs could drive up unemployment and create a crippling ripple effect that could cause the Atlanta Region to become a dependent to the State instead of an economic engine.

Any assumption by neighboring cities or states that stifling the economy in the Atlanta Region will stimulate growth in their areas is not only invalid, but somewhat dangerous. Because Atlanta is a regional capital, business turned away are likely to go to other areas such as Dallas, Memphis, Chicago, New York, or Houston — not Birmingham or Albany.

The Region, the State, the Southeast, and with the Olympic decision - the entire country - has much to loose without an assured water supply for Atlanta. If a permanent solution through reallocation is not put in place, the economy will suffer. This would impact the entire State of Georgia which stands to lose 680,000 jobs, $127 billion in wages, and $8.2 billion in State revenues between now and the year 2010.

HOW MUCH WATER IS IN THE APALACHICOLA-CHATTAHOOCHEE-FLINT RIVER SYSTEM

On the average about 1,300 million gallons per day (MGD) flow in the Chattahoochee River just below Lake Lanier. Even after the Atlanta Region's use, the average flow 40 miles down river at Whitesburg, Georgia nearly doubles to 2,500 MGD. Moving on downstream, the river continues to grow and at Columbus the average flow is 4,300 MGD. By the time the river flows by Columbia, Alabama, its size is four times that at Atlanta. Just after the Chattahoochee River meets the Flint at the Florida line, the average flow is about 14,000 MGD. About 45 percent of this flow is from the Flint River. When the combined Chattahoochee and Flint rivers finally empty into the Gulf of Mexico as the Apalachicola River, the flow has grown to more than twelve times what it was just below Lake Lanier for an average of 16,680 MGD.

During low flow periods these flows can be substantially less. For example, in the drought of 1988 annual flows in the River were 50 percent less at Atlanta, 45 percent less at Columbus, and 29 percent less just before the Apalachicola emptied into the Gulf.

HOW MUCH WATER IS THE ATLANTA REGION USING NOW AND HOW MUCH MORE DOES THE REALLOCATION PROPOSAL PROVIDE

The Atlanta Region's public water supplies currently can withdraw an annual average of about 251 million gallons per day (MGD) from the River and 55 million gallons per day from Lake Lanier. This includes River withdrawals by the City of Atlanta, the Cobb-Marietta Water Authority, DeKalb and Fulton counties, and lake withdrawals by Gwinnett County and the City of Buford. In addition to providing water to their own jurisdictions, these agencies provide water to nine other counties and more than 20 other cities.

By the year 2010, Atlanta Region water demand forecasts call for an additional 128 MGD annual average from the Chattahoochee River and 50 MGD from Lake Lanier for the Atlanta Region over current allocations. The reallocation plan is the most cost-effective and environmentally sound way of meeting the Region's water supply needs.

When current and future allocations are added together, the total for the Atlanta Region is 379 MGD average from the River and 105 MGD from the Lake in the year 2010. Additional water for other lake communities of about 16 MGD has also been requested in the reallocation plan, for a total of 46 MGD in the year 2010.

The above withdrawals do not represent consumptive use since a large part of the water withdrawn from the system in the Atlanta Region is treated and returned to the River. By the year 2010 wastewater treatment plans call for 358 MGD to be treated and returned to the Chattahoochee River. Therefore, consumptive use due to the Atlanta Region in the year 2010 will be 126 million gallons per day (379 + 105 - 358). This means that 74 percent of the water withdrawn by the Atlanta Region will be put back in the river. When withdrawals by others in the basin are included the return rate is 72 percent.

HOW MUCH WILL THE DOWNSTREAM FLOWS BE REDUCED DUE TO ATLANTA REGION'S FUTURE USE

The level of river flows in the Chattahoochee River are actually determined more by the manner the Corps of Engineers operates the dams on the river rather than the Atlanta Region's water use. A recent Corps report showed that flows downstream will increase in the future due to operational plans with reallocation. However, for purposes of illustration, the Atlanta Region's water use in the year 2010 can be imposed on historical average and drought river flows as follows.

In the year 2010, under average conditions the Chattahoochee River's flow will only be reduced due to the Atlanta Region by 5 percent at Whitesburg, Georgia, 3 percent at Columbus, 2 percent at Columbia, Alabama and 1 percent at Chattahoochee, Florida, and less than 1 percent before the Apalachicola empties into the Gulf of Mexico. Even under worse case conditions such as 2010 demands and low river flows caused by drought such as 1988, the Atlanta Region's use amounts to 9 percent at Whitesburg, 5 percent at Columbus, 3 percent at Columbia, Alabama, and 1 percent at the Gulf of Mexico. The Atlanta Region's commitment to water restrictions in severe droughts as in 1988 will prevent such worse case examples from occurring.

WATER CONSERVATION AND WISE RESOURCE MANAGEMENT

A sustained program of water conservation and demand management is already a critical element of the solution to metro Atlanta's water needs. The State of Georgia, the Atlanta Regional Commission, and local governments in the Atlanta area have been working on and requiring water conservation for over ten years. Water conservation measures in the Atlanta Region include low-flow plumbing fixture requirements, water conservation based on pricing, education, low-water using landscaping, education, retrofit packages, and an industrial policy which discourages water intensive industries from locating in the Atlanta Region.

ARC's water demand forecasts take water conservation into account by reducing water use factors in the future. The water conservation-based forecasts coupled with the State of Georgia's water management and permit program insure that this water resource is shared in a responsible manner.

IMPACTS OF REALLOCATION

In October of 1989 the Corps produced a draft Post-Authorization-Change Report (PAC), and in November of the same year held a series of public hearings in Georgia, Florida, and Alabama. Public concerns and false perceptions regarding the impacts to water quality, water supply downstream, navigation, recreation, economic development, and other upstream and downstream users have caused the reallocation proposal to become a controversial project. The PAC report has also helped focus many anti-Atlanta and anti-Corps sentiments, most of which have little to do with reallocation itself.

The U.S. Army Corps of Engineers has determined that the impacts of reallocation are minor and insignificant. Impacts to downstream users, even in worst case conditions, are shown to be insignificant in the Corps' work.

Many of the fears of other users of the system are based on perceptions and not on fact. Examples include:

Apalachicola Bay

The State of Florida objects to the reallocation because it believes that impacts to the Apalachicola Bay were not considered and that reallocation of Lake Lanier presents potential harm to fish and wildlife resources in Florida's River and Bay system. This is not true. Impacts to the Apalachicola Bay were considered in the Corps work. The U.S. Fish and Wildlife Service (Panama City, Florida office) letter to the Corps of Engineers concurs with the Corps Post Authorization Report and favorably considers the project. It should be noted that the U.S. Fish and Wildlife Service previously opposed other alternatives for Atlanta such as a reregulation dam.

It appears that Florida's water quality concerns for the Bay relate to the maintenance of minimum flows to protect the saltwater/freshwater balance in the Bay. When river freshwater flows are low and salinity in the Bay is high, oysters are more susceptible to predators. This is only a concern during droughts. Florida wants a minimum release requirement from Woodruff Dam by the Corps of Engineers to protect the Bay during droughts. This is a reasonable request, but it is not related to the reallocation of Lake Lanier since the Atlanta Region's withdrawals don't significantly reduce downstream flows.

Consumptive Water Loss

Downstream users concerns that Atlanta will consume all the water and prevent their future growth are unfounded. This concern is probably due to the large numbers included in the reports for Atlanta's water

supply. However, what most people don't realize is that most of this water will be used, treated, and put back in the Chattahoochee River.

Consumptive water losses in the year 2010 due to such things as lawn watering etc. in the Atlanta Region will amount to 126 MGD. This will result in only three percent less water at Columbus, Georgia, and one percent less water at the Florida state line under average conditions than if consumptive losses were 0. This is reasonable use and would have occurred with the reregulation dam which was authorized by Congress in 1986.

The level of river flows in the Chattahoochee are determined more by weather conditions in the rest of the basin and how the Corps releases water from all of the projects rather than how much water the Atlanta Region uses. The Atlanta Region's use is a small percentage of the water in the system.

Navigation

Hundreds of miles downstream of the Atlanta Region, the Apalachicola River and the Chattahoochee River below Columbus are used for commercial navigation. The federal navigation channel has a goal of providing a nine-foot deep channel 95 percent of the time. However, due to the history of rainfall and other physical limitations of the rivers, the nine-foot channel is only presently available 78.1 percent of the time.

The Atlanta Region's reasonable future use of its own water resources will make little difference. The reallocation of Lake Lanier will not significantly impact the availability of the nine-foot channel and will actually increase the availability and reliability of a lower channel depth. The reallocation of Lake Lanier will only reduce a full nine-foot channel by 1.1 percent. However, the number of days the shipping channel will stay open at a lower depth (7.5 - 8ft.) will increase by 8.9 percent.

Water Quality

Reallocation will not impact water quality. EPD requires that 750cfs be maintained below Atlanta at all times. Requirements for additional clean-up of Atlanta's wastewater are progressing, including treatment for Combined Sewer Overflows and additional phosphorus removal at treatment plants. Stormwater runoff controls are the focus of new regulations recently issued under the Federal Clean Water Act. Water quality is expected to improve in the future.

Lake Lanier

Minor impact will result at Lake Lanier. Under worst case scenario of 2010 water demands, and no water restrictions or conservation during droughts, the reallocation would result in levels below 1066' for 16 percent of the time over historical record during the recreation season. The Corps estimated that during the 1980's reallocation would have resulted in a 0.9 percent decrease in visitor days. This is minor, especially considering the report did not take into account the water restrictions that would be adopted during a drought. Also, future population growth was not considered in the recreation analysis. Even though some users may go elsewhere, new population will cause the loss to be filled.

Hydropower

There will be a minor loss of peaking power generation. Under reallocation 20% of the power pool will be changed to water supply.

OPPOSITION

In the fall of 1989, Representative Tom Bevill of Alabama used his influence over the Corps of Engineers to direct them to develop another study. This study will be a year 2040 study of the Coosa and Apalachicola-Chattahoochee-Flint River Basins. It appears to us that this study is an attempt to restudy the reallocation of Lake Lanier. The study also proposes to study many other aspects of water resources such as water quality standards and the Georgia Regional Reservoir program. The study would take a minimum of four years and $4 million. Eight years is a more realistic estimate for such a study.

What this means to us is that Alabama is trying to set the stage to halt all growth in the Atlanta Region by the mid-1990s. Reallocation could be delayed for 10 years. If Alabama prevails, the long-term damage to the Atlanta Region's economy will be devastating and perhaps irreparable. We are on the threshold of establishing Atlanta as a global marketplace which will benefit the entire southeastern United States. In June of 1990, the State of Alabama filed a lawsuit and was joined by the State of Florida to prevent the Corps from entering into any agreements for Atlanta's water supply.

SUMMARY

The Atlanta Region has a right to reasonable use of the water resources of this area. The amounts of water discussed above are reasonable amounts for the largest metropolitan area in the southeastern United States. The reallocation of Lake Lanier will provide for this use to the year 2010.

The Atlanta Region has been working in good faith for nearly twenty years with the appropriate state and federal agencies to secure a long-term water supply for the Atlanta Region. Many options have been examined. Out of these options-reallocation of Lake Lanier has been chosen as the best alternative by the Corps- because it will supply Atlanta's water through 2010 in the most cost-efficient, environmentally sound manner and without detrimentally impacting other users of this resource.

Even Congress concurred with this water supply source when it approved the reregulation dam in 1986. The only major difference between the reregulation dam and the reallocation of Lake Lanier is that changing the release patterns of Buford Dam is far less environmentally damaging than building a reregulation dam to do the job.